The amendment presented above incorporate changes as indicated by the marked-up paragraph below.

PYY is the predominant hormone of the pancreatic polypeptide family in developing mouse and rat pancreas. It is a member of the PP family of proteins, which also includes neuropeptide Y (NPY) and pancreatic polypeptide (PP). The sequence for human PYY is given by YPIKPEAPGEDASPEELNRYYASLRHYLNLVTRQRY (SEQ ID No: 3~~1~~).

In the claims:

For the convenience of the Examiner, all claims being examined, whether or not amended, are presented below.

Please cancel, without prejudice, claims 51 and 63.

13. **(Thrice Amended)** A method for altering the glucose-responsiveness of a pancreatic islet or cell, comprising administering to the pancreatic islet or cell a PYY agonist, wherein said PYY agonist comprises a polypeptide encodable by a nucleic acid that hybridizes under stringent conditions, including a wash step of 0.2X SSC at 65 °C, to SEQ ID NO: 1, thereby altering the glucose-responsiveness of the pancreatic islet or cell.

15. **(Thrice Amended)** The method of claim 13, whereby administration of the PYY agonist causes the islet or cell to produce insulin when treated with glucose.

16. **(Reiterated)** The method of claim 13, wherein the islet is a fetal islet.

17. **(Reiterated)** The method of claim 13, wherein the cell is a fetal pancreatic cell.

18. **(Reiterated)** The method of claim 13, wherein the islet is a postpartem islet.

19. **(Reiterated)** The method of claim 13, wherein the cell is a postpartem cell.

20. **(Reiterated)** The method of claim 13, wherein the cell is a pancreatic β cell.

21. **(Thrice Amended)** A method for altering glucose metabolism in an animal identified as having a disease associated with abnormal glucose metabolism, comprising administering to the animal an amount of a composition including a PYY agonist, wherein said PYY agonist comprises a polypeptide encodable by a nucleic acid that hybridizes under stringent conditions, including a wash step of 0.2X SSC at 65 °C, to SEQ ID NO: 1, and wherein the amount is therapeutically effective to induce or enhance glucose responsiveness in the animal, thereby altering glucose metabolism in the animal.

22. **(Twice Amended)** The method of claim 21, wherein said PYY agonist induces or enhances the glucose responsiveness of a pancreatic islet or cell.

23. **(Thrice Amended)** A method for treating a disease associated with altered glucose metabolism, comprising administering to an animal identified as having a disease associated with altered glucose metabolism an amount of a composition comprising a PYY agonist, wherein said PYY agonist comprises a polypeptide encodable by a nucleic acid that hybridizes under stringent conditions, including a wash step of 0.2X SSC at 65 °C, to SEQ ID NO: 1, and wherein the amount is sufficient to increase the glucose responsiveness of a pancreatic islet or cell in the animal.

25. **(Twice Amended)** A method for treating a disease associated with altered glucose metabolism, comprising administering to an animal an amount of a composition comprising glucose responsive islets or cells obtained by the method of claim 13, 15, 17, 19 or 20, wherein the amount is therapeutically effective to induce or enhance glucose responsiveness in the animal.

26. **(Twice Amended)** The method of claim 25, wherein said composition further comprises a PYY agonist comprising a polypeptide encodable by a nucleic acid that hybridizes under stringent conditions, including a wash step of 0.2X SSC at 65 °C, to SEQ ID NO: 1.

27. **(Twice Amended)** The method of claim 26, wherein said composition is conjointly administered either simultaneously, sequentially or separately with said PYY agonist.

28. **(Reiterated)** The method of claim 23, wherein said disease is associated with a condition selected from insulin resistance, glucose intolerance or glucose non-responsiveness, hyperglycemia, obesity, hyperlipidemia or hyperlipoproteinemia in a subject.

29. **(Reiterated)** The method of claim 23, wherein said disease is Type II diabetes mellitus (NIDD).

30. **(Thrice Amended)** The method of any one of claims 13 and 15-20, wherein said PYY agonist is administered together with a dipeptidylpeptidase inhibitor, insulin, or GLP-1.

31. **(Thrice Amended)** The method of any one of claims 13 and 15-20, wherein said PYY agonist is conjointly administered either simultaneously, sequentially, or separately with a dipeptidylpeptidase inhibitor, insulin, or GLP-1.

32. **(Twice Amended)** The method of claim 30, wherein said dipeptidylpeptidase inhibitor is DPIV.

33. **(Thrice Amended)** A method for maintaining or restoring a function of pancreatic β cells, comprising:

administering to a pancreatic islet or cell a composition comprising a PYY agonist, wherein said PYY agonist comprises a polypeptide encodable by a nucleic acid that hybridizes under stringent conditions, including a wash step of 0.2X SSC at 65 °C, to SEQ ID NO: 1, thereby maintaining or restoring a function of pancreatic β cells.

35. **(Thrice Amended)** The method of any one of claims 13 and 15-20, wherein said composition further comprises an agent capable of inhibiting the degradation of said PYY agonist.

36. (**Thrice Amended**) The method of any one of claims 13 and 15-20, further comprising administering to an animal an agent capable of inhibiting the degradation of said PYY agonist either simultaneously, sequentially or separately with said PYY agonist.

37. (**Twice Amended**) The method of claim 36, wherein said agent is co-administered with the PYY agonist.

39. (**Thrice Amended**) The method of any of claims 13 and 15-20, wherein said PYY agonist enhances or recovers glucose responsiveness.

45. (**Thrice Amended**) A method for maintaining or restoring normal pancreatic islet function, comprising administering to a cultured pancreatic islet or cell a PYY agonist, wherein said PYY agonist comprises a polypeptide encodable by a nucleic acid that hybridizes under stringent conditions, including a wash step of 0.2X SSC at 65 °C, to SEQ ID NO: 1, thereby maintaining or restoring normal pancreatic islet function.

46. (**Reiterated**) The method of claim 45, where in said pancreatic islet is a failing β cell.

50. (**Reiterated**) The method of claim 21, wherein said animal is a human.

52. (**Reiterated**) A method of claim 13, wherein said pancreatic islet or cell is a stem cell.

53. (**Reiterated**) The method of claim 17, wherein the cell is a pancreatic β cell.

54. (**Reiterated**) The method of claim 19, wherein the cell is a pancreatic β cell.

55. (**Reiterated**) The method of claim 25, wherein said disease is associated with a condition selected from insulin resistance, glucose intolerance or glucose non-responsiveness, hyperglycemia, obesity, hyperlipidemia and hyperlipoproteinemia in a subject.

56. (**Reiterated**) The method of claim 25, wherein said disease is Type II diabetes mellitus (NIDD).

57. **(Reiterated)** The method of claim 21, wherein said composition further comprises a dipeptidylpeptidase inhibitor, insulin or GLP-1.

58. **(Reiterated)** The method of claim 21, wherein said composition is conjointly administered either simultaneously, sequentially or separately with a dipeptidylpeptidase inhibitor, insulin or GLP-1.

59. **(Reiterated)** The method of claim 23, wherein said composition further comprises a dipeptidylpeptidase inhibitor, insulin or GLP-1.

60. **(Reiterated)** The method of claim 23, wherein said composition is conjointly administered either simultaneously, sequentially or separately with a dipeptidylpeptidase inhibitor, insulin or GLP-1.

61. **(Reiterated)** The method of claim 25, wherein said composition further comprises a dipeptidylpeptidase inhibitor, insulin or GLP-1.

62. **(Reiterated)** The method of claim 25, wherein said composition is conjointly administered either simultaneously, sequentially or separately with a dipeptidylpeptidase inhibitor, insulin or GLP-1.

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65. **(Twice Amended)** The method of claim 33, wherein said composition further comprises an agent capable of inhibiting the degradation of said PYY agonist.

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66. **(Twice Amended)** The method of claim 33, further comprising administering to an animal an agent capable of inhibiting the degradation of said PYY agonist either simultaneously, sequentially or separately with said peptidyl PYY agonist.

67. **(Twice Amended)** The method of claim 66, wherein said agent is co-administered with the PYY agonist.

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69. **(Twice Amended)** The method of claim 21, wherein said composition further comprises an agent capable of inhibiting the degradation of said PYY agonist.

70. **(Twice Amended)** The method of claim 21, further comprising administering to an animal an agent capable of inhibiting the degradation of said PYY agonist either simultaneously, sequentially or separately with said PYY agonist.

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71. **(Twice Amended)** The method of claim 70, wherein said agent is co-administered with the PYY agonist.

73. **(Twice Amended)** The method of claim 23, wherein said composition further comprises an agent capable of inhibiting the degradation of said PYY agonist.

74. **(Twice Amended)** The method of claim 23, further comprising administering to an animal an agent capable of inhibiting the degradation of said PYY agonist either simultaneously, sequentially or separately with said PYY agonist.

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75. **(Twice Amended)** The method of claim 74, wherein said agent is co-administered with the PYY agonist.

76. **(Twice Amended)** The method of claim 23, wherein said PYY agonist enhances or recovers glucose responsiveness.

77. **(Twice Amended)** The method of claim 21, wherein said PYY agonist enhances or recovers glucose responsiveness.

78. **(Twice Amended)** The method of claim 33, wherein said PYY agonist enhances or recovers glucose responsiveness.

79. **(Reiterated)** The method of claim 25, wherein the glucose responsive islets or cells produce insulin when treated with glucose.

80. (**Reiterated**) The method of claim 25, wherein the islets include fetal islets.

81. (**Reiterated**) The method of claim 25, wherein the cells include fetal pancreatic cells.

82. (**Reiterated**) The method of claim 25, wherein the islets include postpartem islets.

83. (**Reiterated**) The method of claim 25, wherein the cells include postpartem cells.

84. (**Reiterated**) The method of claim 25, wherein the cells include pancreatic β cells.

85. (**Reiterated**) The method of claim 23, wherein said animal is a human.

F15 86. (**Amended**) The method of claim 25, wherein said animal is a human.

F16 87. (**Amended**) A method for altering the glucose-responsiveness of a pancreatic islet or cell, comprising administering to the pancreatic islet or cell PYY, thereby altering the glucose-responsiveness of the pancreatic islet or cell.

88. (**Amended**) A method for altering glucose metabolism in an animal identified as having a disease associated with abnormal glucose metabolism, comprising administering to the animal an amount of a composition including PYY, wherein the amount of PYY is therapeutically effective to induce or enhance glucose responsiveness in the animal, thereby altering glucose metabolism in the animal.

89. (**Amended**) A method for treating a disease associated with altered glucose metabolism, comprising administering to an animal identified as having a disease associated with altered glucose metabolism an amount of a composition comprising PYY, wherein the amount of PYY is sufficient to increase the glucose responsiveness of a pancreatic islet or cell in the animal.

90. (**Amended**) A method for maintaining or restoring a function of pancreatic β cells, comprising administering to a pancreatic islet or cell a composition comprising PYY, thereby maintaining or restoring a function of pancreatic β cells.

91. **(Amended)** A method for maintaining or restoring normal pancreatic islet function, comprising administering to a cultured pancreatic islet or cell PYY, thereby maintaining or restoring normal pancreatic islet function.

F16 cont.

◊◊ Please add the following new claims:

92. **(NEW)** A method for altering the glucose-responsiveness of a pancreatic islet or cell, comprising administering to the pancreatic islet or cell PYY, thereby altering the glucose-responsiveness of the pancreatic islet or cell.

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93. **(NEW)** A method for altering glucose metabolism in an animal identified as having a disease associated with abnormal glucose metabolism, comprising administering to the animal an amount of a composition including PYY, wherein the amount of PYY is therapeutically effective to induce or enhance glucose responsiveness in the animal, thereby altering glucose metabolism in the animal.

94. **(NEW)** A method for treating a disease associated with altered glucose metabolism, comprising administering to an animal identified as having a disease associated with altered glucose metabolism an amount of a composition comprising PYY, wherein the amount of PYY is sufficient to increase the glucose responsiveness of a pancreatic islet or cell in the animal.

95. **(NEW)** A method for maintaining or restoring normal pancreatic islet function, comprising administering to a cultured pancreatic islet or cell PYY, thereby maintaining or restoring normal pancreatic islet function.

The claims presented above incorporate changes as indicated by the marked-up versions below.

13. **(Thrice Amended)** A method for altering the glucose-responsiveness of a pancreatic islet or cell, comprising administering to the pancreatic islet or cell a ~~peptidyl~~ PYY agonist, wherein said PYY agonist comprises a polypeptide encodable by a nucleic acid that hybridizes under

stringent conditions, including a wash step of 0.2X SSC at 65 °C, to SEQ ID NO: 1, thereby altering the glucose-responsiveness of the pancreatic islet or cell.

15. **(Thrice Amended)** The method of claim 13, whereby administration of the ~~peptidyl~~ PYY agonist causes the islet or cell to produce insulin when treated with glucose.

21. **(Thrice Amended)** A method for altering glucose metabolism in an animal identified as having a disease associated with abnormal glucose metabolism, comprising administering to the animal an amount of a composition including a ~~peptidyl~~ PYY agonist, wherein said PYY agonist comprises a polypeptide encodable by a nucleic acid that hybridizes under stringent conditions, including a wash step of 0.2X SSC at 65 °C, to SEQ ID NO: 1, and wherein the amount is therapeutically effective to induce or enhance glucose responsiveness in the animal, thereby altering glucose metabolism in the animal.

22. **(Twice Amended)** The method of claim 21, wherein said ~~peptidyl~~ PYY agonist induces or enhances the glucose responsiveness of a pancreatic islet or cell.

23. **(Thrice Amended)** A method for treating a disease associated with altered glucose metabolism, comprising administering to an animal identified as having a disease associated with altered glucose metabolism an amount of a composition comprising a ~~peptidyl~~ PYY agonist, wherein said PYY agonist comprises a polypeptide encodable by a nucleic acid that hybridizes under stringent conditions, including a wash step of 0.2X SSC at 65 °C, to SEQ ID NO: 1, and wherein the amount is sufficient to increase the glucose responsiveness of a pancreatic islet or cell in the animal.

25. **(Twice Amended)** A method for treating a disease associated with altered glucose metabolism, comprising administering to an animal an amount of a composition comprising glucose responsive islets or cells obtained by the method of claim 13, ~~14,~~ 15, 17, 19 or 20, wherein the amount is therapeutically effective to induce or enhance glucose responsiveness in the animal.

26. (**Twice Amended**) The method of claim 25, wherein said composition further comprises a ~~peptidyl~~ PYY agonist comprising a polypeptide encodable by a nucleic acid that hybridizes under stringent conditions, including a wash step of 0.2X SSC at 65 °C, to SEQ ID NO: 1.

27. (**Twice Amended**) The method of claim 26, wherein said composition is conjointly administered either simultaneously, sequentially or separately with said ~~a peptidyl~~ PYY agonist.

30. (**Thrice Amended**) The method of any one of claims 13 and 15-20, wherein said ~~peptidyl~~ PYY agonist is administered together with a dipeptidylpeptidase inhibitor, insulin, or GLP-1.

31. (**Thrice Amended**) The method of any one of claims 13 and 15-20, wherein said ~~peptidyl~~ PYY agonist is conjointly administered either simultaneously, sequentially, or separately with a dipeptidylpeptidase inhibitor, insulin, or GLP-1.

32. (**Twice Amended**) The method of claim 30, wherein said dipeptidylpeptidase inhibitor is DPIV.

33. (**Thrice Amended**) A method for maintaining or restoring a function of pancreatic β cells, comprising:

administering to a pancreatic islet or cell a composition comprising a ~~peptidyl~~ PYY agonist, wherein said PYY agonist comprises a polypeptide encodable by a nucleic acid that hybridizes under stringent conditions, including a wash step of 0.2X SSC at 65 °C, to SEQ ID NO: 1, thereby maintaining or restoring a function of pancreatic β cells.

35. (**Thrice Amended**) The method of any one of claims 13 and 15-20, wherein said composition further comprises an agent capable of inhibiting the degradation of said ~~a peptidyl~~ PYY agonist.

36. (**Thrice Amended**) The method of any one of claims 13 and 15-20, further comprising administering to an animal an agent capable of inhibiting the degradation of said ~~a peptidyl~~ PYY agonist either simultaneously, sequentially or separately with said ~~peptidyl~~ PYY agonist.

37. **(Twice Amended)** The method of claim 36 ~~34~~, wherein said agent is co-administered with the ~~peptidyl~~ PYY agonist.

39. **(Thrice Amended)** The method of any of claims 13 and 15-20, wherein said ~~peptidyl~~ PYY agonist enhances or recovers glucose responsiveness.

45. **(Thrice Amended)** A method for maintaining or restoring normal pancreatic islet function, comprising administering to a cultured pancreatic islet or cell a ~~peptidyl~~ PYY agonist, wherein said PYY agonist comprises a polypeptide encodable by a nucleic acid that hybridizes under stringent conditions, including a wash step of 0.2X SSC at 65 °C, to SEQ ID NO: 1, thereby maintaining or restoring normal pancreatic islet function.

65. **(Twice Amended)** The method of claim 33, wherein said composition further comprises an agent capable of inhibiting the degradation of said ~~a peptidyl~~ PYY agonist.

66. **(Twice Amended)** The method of claim 33, further comprising administering to an animal an agent capable of inhibiting the degradation of said ~~a peptidyl~~ PYY agonist either simultaneously, sequentially or separately with said peptidyl PYY agonist.

67. **(Twice Amended)** The method of claim 66, wherein said agent is co-administered with the ~~peptidyl~~ PYY agonist.

69. **(Twice Amended)** The method of claim 21, wherein said composition further comprises an agent capable of inhibiting the degradation of said ~~a peptidyl~~ PYY agonist.

70. **(Twice Amended)** The method of claim 21, further comprising administering to an animal an agent capable of inhibiting the degradation of said ~~a peptidyl~~ PYY agonist either simultaneously, sequentially or separately with said PYY agonist.

71. **(Twice Amended)** The method of claim 70, wherein said agent is co-administered with the ~~peptidyl~~ PYY agonist.

73. **(Twice Amended)** The method of claim 23, wherein said composition further comprises an agent capable of inhibiting the degradation of said ~~a peptidyl~~ PYY agonist.

74. **(Twice Amended)** The method of claim 23, further comprising administering to an animal an agent capable of inhibiting the degradation of said ~~a peptidyl~~ PYY agonist either simultaneously, sequentially or separately with said ~~peptidyl~~ PYY agonist.

75. **(Twice Amended)** The method of claim 74, wherein said agent is co-administered with the ~~peptidyl~~ PYY agonist.

76. **(Twice Amended)** The method of claim 23, wherein said ~~peptidyl~~ PYY agonist enhances or recovers glucose responsiveness.

77. **(Twice Amended)** The method of claim 21, wherein said ~~peptidyl~~ PYY agonist enhances or recovers glucose responsiveness.

78. **(Twice Amended)** The method of claim 33, wherein said ~~peptidyl~~ PYY agonist enhances or recovers glucose responsiveness.

86. **(Amended)** The method of ~~any one of the above claims~~ claim 25, wherein said animal is a human.

87. **(Amended)** ~~The~~ A method ~~of claim 13, wherein the peptidyl PYY agonist is~~ for altering the glucose-responsiveness of a pancreatic islet or cell, comprising administering to the pancreatic islet or cell PYY, thereby altering the glucose-responsiveness of the pancreatic islet or cell.

88. **(Amended)** ~~The~~ A method ~~of claim 21, wherein the peptidyl PYY agonist is~~ for altering glucose metabolism in an animal identified as having a disease associated with abnormal glucose metabolism, comprising administering to the animal an amount of a composition including PYY, wherein the amount of PYY is therapeutically effective to induce or enhance glucose responsiveness in the animal, thereby altering glucose metabolism in the animal.